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APPLICATION NO.	FILING DATE	FIRST NAMED INVENTOR	ATTORNEY DOCKET NO.	CONFIRMATION NO.
09/710,675	11/09/2000	Yutao Zhou	32576	4806

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EXAMINER

KEANEY, ELIZABETH MARIE

ART UNIT	PAPER NUMBER
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2882

DATE MAILED: 10/23/2003

Please find below and/or attached an Office communication concerning this application or proceeding.

Office Action Summary

Application No.

09/710,675

Applicant(s)

ZHOU ET AL.

Examiner

Elizabeth Gemmell

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-- The MAILING DATE of this communication appears on the cover sheet with the correspondence address --

Period for Reply

A SHORTENED STATUTORY PERIOD FOR REPLY IS SET TO EXPIRE 3 MONTH(S) FROM THE MAILING DATE OF THIS COMMUNICATION.

- Extensions of time may be available under the provisions of 37 CFR 1.136(a). In no event, however, may a reply be timely filed after SIX (6) MONTHS from the mailing date of this communication.
- If the period for reply specified above is less than thirty (30) days, a reply within the statutory minimum of thirty (30) days will be considered timely.
- If NO period for reply is specified above, the maximum statutory period will apply and will expire SIX (6) MONTHS from the mailing date of this communication.
- Failure to reply within the set or extended period for reply will, by statute, cause the application to become ABANDONED (35 U.S.C. § 133).
- Any reply received by the Office later than three months after the mailing date of this communication, even if timely filed, may reduce any earned patent term adjustment. See 37 CFR 1.704(b).

Status

- 1) ☒ Responsive to communication(s) filed on 17 July 2003.
- 2a) ☐ This action is **FINAL**. 2b) ☒ This action is non-final.
- 3) ☐ Since this application is in condition for allowance except for formal matters, prosecution as to the merits is closed in accordance with the practice under *Ex parte Quayle*, 1935 C.D. 11, 453 O.G. 213.

Disposition of Claims

- 4) ☒ Claim(s) 1-33 is/are pending in the application.
- 4a) Of the above claim(s) _____ is/are withdrawn from consideration.
- 5) ☒ Claim(s) 20-22, 26 and 30-33 is/are allowed.
- 6) ☒ Claim(s) 1-20, 23-25 and 27-29 is/are rejected.
- 7) ☐ Claim(s) _____ is/are objected to.
- 8) ☐ Claim(s) _____ are subject to restriction and/or election requirement.

Application Papers

- 9) ☐ The specification is objected to by the Examiner.
- 10) ☒ The drawing(s) filed on 09 November 2000 is/are: a) ☒ accepted or b) ☐ objected to by the Examiner.
- Applicant may not request that any objection to the drawing(s) be held in abeyance. See 37 CFR 1.85(a).
- 11) ☐ The proposed drawing correction filed on _____ is: a) ☐ approved b) ☐ disapproved by the Examiner.
- If approved, corrected drawings are required in reply to this Office action.
- 12) ☐ The oath or declaration is objected to by the Examiner.

Priority under 35 U.S.C. §§ 119 and 120

- 13) ☐ Acknowledgment is made of a claim for foreign priority under 35 U.S.C. § 119(a)-(d) or (f).
- a) ☐ All b) ☐ Some * c) ☐ None of:
- ☐ Certified copies of the priority documents have been received.
 - ☐ Certified copies of the priority documents have been received in Application No. _____.
 - ☐ Copies of the certified copies of the priority documents have been received in this National Stage application from the International Bureau (PCT Rule 17.2(a)).
- * See the attached detailed Office action for a list of the certified copies not received.
- 14) ☐ Acknowledgment is made of a claim for domestic priority under 35 U.S.C. § 119(e) (to a provisional application).
- a) ☐ The translation of the foreign language provisional application has been received.
- 15) ☐ Acknowledgment is made of a claim for domestic priority under 35 U.S.C. §§ 120 and/or 121.

Attachment(s)

- 1) ☒ Notice of References Cited (PTO-892)
- 2) ☐ Notice of Draftsperson's Patent Drawing Review (PTO-948)
- 3) ☐ Information Disclosure Statement(s) (PTO-1449) Paper No(s) _____.
- 4) ☐ Interview Summary (PTO-413) Paper No(s) _____.
- 5) ☐ Notice of Informal Patent Application (PTO-152)
- 6) ☐ Other: _____.

DETAILED ACTION

Receipt is acknowledged of the Amendments filed 3 July 2003 and 17 July 2003.

The indicated allowability of claim 10 from the previous Office Action (paper number 5) is withdrawn in view of the recognition that it would have been obvious to modify Walsh (US Patent 4,728,848) and Zalar et al. (US Patent 5,057,735; hereinafter Zalar) in order to teach the subject matter of claim 10. Any inconvenience is regretted. New rejections are presented below.

Response to Arguments

Applicant's arguments with respect to claims 1-33 have been considered but are moot in view of the new ground(s) of rejection.

Claim Rejections - 35 USC § 102

The following is a quotation of the appropriate paragraphs of 35 U.S.C. 102 that form the basis for the rejections under this section made in this Office action:

A person shall be entitled to a patent unless –

(b) the invention was patented or described in a printed publication in this or a foreign country or in public use or on sale in this country, more than one year prior to the date of application for patent in the United States.

Claims 15-17, 27 and 28 are rejected under 35 U.S.C. 102(b) as being anticipated by Kokado. (US Patent 6,280,061).

Re claim 15: Kokado discloses, in figure 1 and throughout the disclosure, a reflector lamp comprising:

- a glass shell (column 3, line 54) having:
 - a thickness
 - a reflective coating disposed on the inner surface (column 3, line 55),
 - a bottom,
 - an opening at the bottom (6)
- a base (3),
 - extending from the bottom of the glass shell and the opening and the base defining a nose chamber (3), the nose chamber having an inner surface and a bottom, the nose chamber defining a slot having a major and minor dimension, the major dimension being substantially longer than the minor dimension, and
- a wire lamp (7) disposed within the shell

Re claim 16: Kokado discloses, in figure 1 and throughout the disclosure, the base having three openings (5c, 5d), the openings being in communication with the slot.

Re claim 17: Kokado discloses, in figure 1 and throughout the disclosure, the slot having a substantially rectangular cross-section (3).

Re claim 27: As best understood by the examiner, the nose chamber has a reflective coating disposed on the inner surface of the nose chamber (3).

Re claim 28: As best understood by the examiner, the nose chamber bottom has three openings (5c and 5d), the openings being in communication with the nose chamber.

Claim Rejections - 35 USC § 103

The following is a quotation of 35 U.S.C. 103(a) which forms the basis for all obviousness rejections set forth in this Office action:

(a) A patent may not be obtained though the invention is not identically disclosed or described as set forth in section 102 of this title, if the differences between the subject matter sought to be patented and the prior art are such that the subject matter as a whole would have been obvious at the time the invention was made to a person having ordinary skill in the art to which said subject matter pertains. Patentability shall not be negated by the manner in which the invention was made.

Claims 1-6, 11-14, and 23 are rejected under 35 U.S.C. 103(a) as being unpatentable over Walsh in view of Zalar.

Re claim 1: Walsh discloses a reflector lamp comprising:

- a glass shell (figure 1, 1) having:
 - a concave inner surface and an outer surface (column 2, lines 8+),
 - a thickness,
 - a reflective coating disposed on the inner surface (figure 1, 18),
 - a bottom, an opening at the bottom,

- a base (figure 1, 6) extending from the bottom of the glass shell and defining a nose chamber (figure 1, 21),
- a wire lamp (figure 1, 14) disposed within the glass shell, and
- a heat shield (figure 1, 19) being disposed substantially within or adjacent to the nose chamber (column 2, lines 30+).

Walsh fails to teach or fairly suggest an exhaust hole adapted for the passage of an exhaust tube in the base of the nose chamber.

Zalar discloses, in figure 1 and throughout the disclosure, an exhaust hole (54) adapted for the passage of an exhaust tube in the base of the nose chamber.

It would have been obvious to one of ordinary skill in the art at the time the invention was made to include an exhaust hole in the base of the nose chamber disclosed by Walsh because by including an exhaust hole the lamp can be properly pressurized, thereby improving the brightness and life of the lamp.

Walsh further fails to teach or fairly suggest the nose chamber having a diameter of less than 1 inch.

It would have been obvious to one of ordinary skill in the art at the time the invention was made to modify the lamp disclosed by Walsh to have a nose chamber having a diameter of less than 1 inch because an artisan would recognize the size of the nose is dependant on the size of the bulb. Therefore, if a smaller bulb is used within the reflector lamp, the size of the nose must also be smaller in order to maintain the amount of light reflected from the lamp.


Re claim 2: Walsh discloses the concave inner surface being substantially parabolic (column 2, lines 26+).

Re claim 3: Walsh discloses the heat shield positioned to substantially complete the parabolic inner surface (column 2, lines 30+).

Re claim 4: Walsh discloses the heat shield having a concave curved-shape (column 2, line 34).

Re claims 5 and 12: Walsh shows all the limitations as shown above.

However, Walsh fails to teach or fairly suggest the heat shield comprised of stainless steel.

 Absent ^a showing criticality, the choice and substitution of one well known reflective material for another would have been obvious to one of ordinary skill in the art. Specifically, Walsh teaches the use of a reflective coating. One of ordinary skill in the art at the time the invention was made would have recognized that the substitution of stainless steel for the reflective coating would be matter of design choice and the substitution would not alter the function of the reflection coating and would still reflect the light emitted from the lamp.

Re claim 6: Walsh discloses the heat shield comprising a substrate and a reflective coating disposed on the substrate (column 2, lines 36+).

Re claim 7: Walsh shows all the limitations as shown above.

However, Walsh fails to teach or suggest the nose chamber having a plurality of holes disposed in the base of the nose chamber.

Zalar discloses, in figure 1 and throughout the disclosure, a nose chamber having a plurality of holes (48,50,54) disposed in the base of the nose chamber.

It would have been obvious to one of ordinary skill in the art at the time the invention was made to modify Walsh with a nose chamber having a plurality of holes disposed in the base of the nose chamber because the two leads can be electrically connected to the base as well having an evacuation hole in order to properly pressurize the lamp.

Re claim 8: Walsh shows all the limitations as shown above.

However, Walsh fails to teach or suggest the number of holes in the nose chamber to be three.

Zalar discloses, in figure 1 and throughout the disclosure, the number of holes in the nose chamber to be three (48,50,54).

It would have been obvious to one of ordinary skill in the art at the time the invention was made to modify Walsh with a nose chamber having three holes disposed

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in the base of the nose chamber because the two leads can be electrically connected to the base as well having an evacuation hole in order to properly pressurize the lamp.

Re claim 9: Walsh shows all the limitations as shown above.

However, Walsh fails to teach or fairly suggest two holes adapted for the passage of the ferrules and one of the holes is the exhaust hole.

Zalar discloses, in figure 1 and throughout the disclosure, two holes (48 and 50) adapted for the passage of the ferrules (42 and 44) and one of the holes is the exhaust hole (54).

It would have been obvious to one of ordinary skill in the art at the time the invention was made to modify Walsh with a nose chamber having two holes adapted for the passage of the ferrules and one of the holes is the exhaust hole in the nose chamber because the two ferrules can be electrically connected to the base as well having an evacuation hole in order to properly pressurize the lamp.

Re claim 11: Walsh discloses a reflective coating on the substrate comprising at least one metal selected from the group consisting of silver, gold, white gold, aluminum, and chromium (column 2, lines 36+).

Re claim 14: Walsh discloses the heat shield positioned below the opening at the bottom of the glass shell within 4 mm thereof (column 2, lines 30+).

Re claim 23: Walsh discloses all the limitations as shown above.

However, Walsh fails to disclose the use of chromium for the reflective coating.

10/19/03
Absent ^a showing criticality, the choice and substitution of one well known reflective material for another would have been obvious to one of ordinary skill in the art. Specifically, Walsh teaches the use of a reflective coating. One of ordinary skill in the art at the time the invention was made would have recognized that the substitution of chromium for the reflective coating would be matter of design choice and the substitution would not alter the function of the reflection coating and would still reflect the light emitted from the lamp.

Claim 10 is rejected under 35 U.S.C. 103(a) as being unpatentable over Walsh and Zalar in view of Tyler et al. (US Patent 4,451,873; hereinafter Tyler).

Walsh and Zalar show all the limitations as shown above.

However, they fail to teach or fairly suggest the exhaust hole being substantially offset from the center of the base of the nose lamp.

Tyler discloses, in figure 6 and throughout the disclosure, an exhaust hole being substantially offset from the center of the base of the nose lamp (74).

It would have been obvious to one of ordinary skill in the art at the time the invention was made to substantially offset the exhaust hole disclosed by Walsh and Zalar in order to improve the process of evacuating or flushing the lamp and then

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refilling the lamp (column 6, lines 2+). Therefore, the lamp would have greater brightness and an extended life.

Claims 18, 24,25 and 29 are rejected under 35 U.S.C. 103(a) as being unpatentable over Kokado.

Re claim 18: Kokado shows all the limitations as shown above.

However, Kokado fails to teach or fairly suggest the slot having an elliptical cross-section.

It would have been obvious to one of ordinary skill in the art at the time the invention was made to use an elliptical cross-section rather than a rectangular cross-section because manufacturing is simplified. Therefore, more lamps can be produced in a shorter amount of time.

Re claims 24,25 and 29: Kokado shows all the limitations as shown above.

However, Kokado fails to teach or fairly suggest any dimensions of the slot within the lamp.

One of ordinary skill in the art at the time the invention was made would recognize the dimensions of the slot are a matter of design found by routine experimentation in order to fit the desired lamp used in the system. Therefore it would have been obvious to one of ordinary skill in the art to use a slot having a factor selected from 1.5,2,3,4 and 5, a slot having a major dimension 4 times that of the minor

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dimension and a minor dimension less than an inch in order to increase the reflectance area of the reflector, thereby improving the overall brightness of the lamp.

Claim 19 is rejected under 35 U.S.C. 103(a) as being unpatentable over Kokado in view of Roller et al. (US Patent 4,437,145; hereinafter Roller).

Kokado shows all the limitations as shown above.

However, Kokado fails to teach or suggest the base of the lamp having cross section that is substantially shaped like a cross.

Roller discloses, in figure 7 and throughout the disclosure, a base of a lamp having cross section that is substantially shaped like a cross (31e).

It would have been obvious to one of ordinary skill in the art at the time the invention was made to use a base shaped like a cross within the lamp disclosed by Kokado because the cross shaped base would better anchor the lamp, thereby preventing damage in transport.

Allowable Subject Matter

Claims 20-22,26 and 30-33 are allowable over the prior art.

The following is a statement of reasons for the indication of allowable subject matter: The best prior art of record discloses a reflector lamp system. However, the prior art fails to teach or fairly suggest an overhang portion defining a slot having a

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longitudinal dimension longer than a lateral dimension as claimed in claim 20. Claims 21,22,26 and 30-33 are allowable by virtue of their dependance.

Conclusion

Any inquiry concerning this communication or earlier communications from the examiner should be directed to Elizabeth Gemmell whose telephone number is (703) 305-1937. The examiner can normally be reached on Monday-Thursday 6:30-5.

If attempts to reach the examiner by telephone are unsuccessful, the examiner's supervisor, Ed Glick can be reached on (703) 308-4858. The fax phone number for the organization where this application or proceeding is assigned is (703) 872-9306.

Any inquiry of a general nature or relating to the status of this application or proceeding should be directed to the receptionist whose telephone number is (703) 308-0956.



emg



EDWARD J. GLICK
SUPERVISORY PATENT EXAMINER